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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Scob No Lee

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EXAMINER

LEE, BETTY E

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/828,339	Applicant(s) LEE, SEOB NO	
	Examiner Betty Lee	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 April 2004 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 13-17 are objected to because of the following informalities:

Claim 13 line 10 recites "buffering the ATM traffic corresponding to the UBR rate andan MPLS traffic storing unit". "andan" should be changed to --- and a ---.

Claims 14-17 are rejected as being dependent on a rejected base claim.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims **1-32** are rejected under 35 U.S.C. 102(e) as being anticipated by Kuhl et al. (US 2003/0123449).

Regarding claim 1, Kuhl teaches classifying by rate, traffic inputted to an egress through at least one channel (see paragraph 66 lines 13-16 and Table A);

acquiring a total of channel bandwidths of ATM traffic of the inputted traffic corresponding to at least one setup rate (see paragraph 88 lines 1-6 and Table D; The

reserved bandwidths are totaled and are guaranteed the bandwidth with the corresponding real-time traffic rate in a line rate packet stream.); and

forwarding the ATM traffic corresponding to the setup rate through a single channel having the acquired bandwidth (see paragraph 88 lines 1-6).

Regarding claim 2, Kuhl further teaches comprising forwarding MPLS traffic of the inputted traffic by subscriber channel according to a priority of the classified rate (see Table A and paragraph 70 lines 1-5).

Regarding claim 3, Kuhl further teaches performing processing on a second layer of the forwarded traffic (see paragraph 56 lines 1-12); and matching the processed traffic to a physical layer (see paragraph 56 lines 1-12; The gateways perform processing on a second layer and transmit the processed data on a physical layer.).

Regarding claim 4, Kuhl further teaches the rate includes CBR, RT-VBR, NRT-VBR and UBR, in hierarchical order (see Table B).

Regarding claim 5, Kuhl further teaches the setup rate includes CBR, RT-VBR, and NRT-VBR rates (see Table C).

Regarding claim 6, Kuhl further teaches the ATM traffic corresponding to the setup rate is real-time traffic (see paragraph 52 lines 1-4).

Regarding claim 7, Kuhl teaches classifying ATM traffic of traffic inputted to an egress through at least one channel, into non-unspecified bit rate (UBR) traffic and UBR traffic (see Table A);

finding a total of channel bandwidths assigned to the classified non-UBR traffic (see paragraph 88 lines 1-6); and

forwarding the classified non-UBR traffic through a single channel having a bandwidth amounting to the found total (see paragraph 88 lines 1-6).

Regarding claim 8, Kuhl further teaches classifying MPLS traffic of the inputted traffic by rate (see Table C); and

forwarding the MPLS traffic by channel according to a priority of the classified rate (see Table B and paragraph 78 lines 8-12).

Regarding claim 9, Kuhl further teaches performing processing on a second layer of the forwarded traffic (see paragraph 56 lines 1-12); and matching the processed traffic to a physical layer (see paragraph 56 lines 1-12; The gateways perform processing on a second layer and transmit the processed data on a physical layer.).

Regarding claim 10, Kuhl further teaches the rate includes CBR, RT-VBR, NRT-VBR and UBR, in hierarchical order (see Table B).

Regarding claim 11, Kuhl further teaches ATM traffic of the non-UBR rate is forwarded with a same priority as the MPLS traffic of the CBR rate (see Table C).

Regarding claim 12, Kuhl further teaches the ATM traffic of the non-UBR rate and the MPLS traffic of the CBR rate are forwarded by a round robin method when simultaneously inputted (see paragraph 81 lines 1-5).

Regarding claim 13, Kuhl teaches a traffic rate classifying unit classifying traffic inputted to an egress by rate, where ATM traffic of the inputted traffic is classified into a non-unspecified bit rate (UBR) traffic rate and a UBR traffic rate (see Table A), and where MPLS traffic of the inputted traffic are classified into constant bit rate (CBR), real-

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time variable bit rate (RT-VBR), non-real-time variable bit rate (NRT-VBR), and unspecified bit rate (UBR), in hierarchical order (see Table B);

a traffic storing unit comprising an ATM traffic storing unit having a first buffer buffering the ATM traffic corresponding to the non-UBR rate and a second buffer buffering the ATM traffic corresponding to the UBR rate (see Fig. 6 Box 602) and a MPLS traffic storing unit having a plurality of buffers buffering the MPLS traffic by classified rate and by channel (see Table C); and

a scheduler forwarding traffic stored in the traffic storing unit according to a priority of each of the classified rates (see paragraph 77 lines 1-3).

Regarding claim 14, Kuhl further teaches the non-UBR traffic rate includes CBR, RT-VBR, and NRT-VBR (see Table B).

Regarding claim 15, Kuhl further teaches the scheduler forwards the ATM traffic of the non-UBR rate stored in the first buffer unit with the same priority of the MPLS traffic of the CBR rate (see Table C).

Regarding claim 16, Kuhl further teaches the scheduler finds a total of channel bandwidths of the ATM traffic corresponding to the non-UBR rate and forwards the ATM traffic stored in the first buffer unit through a single channel having a bandwidth amounting to the found total (see paragraph 88 lines 1-6).

Regarding claim 17, Kuhl further teaches an ATM processing unit performing processing on a second layer of the forwarded traffic; and a physical layer matching unit matching the processed traffic to a physical layer (see paragraph 56 lines 1-12; The

gateways perform processing on a second layer and transmit the processed data on a physical layer.).

Regarding claim 18, Kuhl teaches classifying inputted traffic by a classification rate (see Table A);

acquiring a total channel bandwidth of asynchronous transfer mode traffic corresponding to at least one setup rate (see paragraph 88 lines 1-6 and Table D; The reserved bandwidths are totaled and are guaranteed the bandwidth with the corresponding real-time traffic rate in a line rate packet stream.); and

forwarding the asynchronous transfer mode traffic corresponding to the setup rate (see paragraph 79 lines 6-9);

where the forwarding the asynchronous traffic mode traffic occurs through a single having the acquired bandwidth (see paragraph 88 lines 1-6).

Regarding claim 19, Kuhl further teaches forwarding multi-protocol label switching traffic by subscriber channel (see paragraph 77 lines 1-6);

performing processing on a second layer of the forwarded traffic (see paragraph 56 lines 1-12; The gateways perform processing on a second layer.); and

matching the processed traffic to a physical layer (see paragraph 56 lines 1-12; The gateways and transmit the processed data on a physical layer.);

where the forwarding multi-protocol label switching occurs according to a priority of the classification rate (see Table B).

Regarding claims 20 and 21, Kuhl further teaches the classification rate includes CBR, RT-VBR, NRT-VBR and UBR, in hierarchical order (see Table B).

Regarding claim 22, Kuhl further teaches the setup rate includes CBR, RT-VBR, and NRT-VBR rates (see Table C).

Regarding claim 23, Kuhl further teaches the ATM traffic corresponding to the setup rate is real-time traffic (see paragraph 52 lines 1-4).

Regarding claim 24, Kuhl teaches a traffic rate classifying unit (see paragraph 69 lines 1-8);

a traffic storing unit (see Fig. 6 Box 602); and

a scheduler (see Fig. 6 Box 605);

where the traffic rate classifying unit classifies asynchronous transfer mode traffic by unspecified bit rate and non-unspecified bit rate (see paragraph 69 lines 1-8).

Regarding claim 25, Kuhl further teaches an asynchronous transfer mode traffic storing unit (see Fig. 6 Box 602); and a multi-protocol switching traffic storing unit (see Fig. 8A Boxes 704, 706, 708).

Regarding claim 26, Kuhl further teaches a first buffer buffering asynchronous transfer mode traffic corresponding to the non-unspecified bit rate (see Fig. 6 Box 602b); and

a second buffer buffering asynchronous transfer mode traffic corresponding to the unspecified bit rate (see Fig. 6 Box 602a).

Regarding claim 27, Kuhl further teaches the multi-protocol label switching traffic storing unit further comprises a plurality of buffers buffering multi-protocol label switching traffic by a classification rate (see Fig. 7 Boxes 706a-h) and by channel (see Fig. 7 Boxes 703, 705, 717).

Regarding claim 28, Kuhl further teaches the traffic rate classifying unit classifies multi-protocol label switching traffic by constant bit rate, real-time variable bit rate, non-real-time variable bit rate, and unspecified bit rate (see Table C).

Regarding claim 29, Kuhl further teaches the scheduler forwards traffic stored in the traffic storing unit according to a priority of each of a classified rate (see paragraph 79 lines 6-9).

Regarding claim 30, Kuhl further teaches an asynchronous transfer mode processing unit performing processing on a second layer of forwarded traffic; and a physical layer matching unit matching processed traffic to a physical layer(see paragraph 56 lines 1-12; The gateways perform processing on a second layer and transmit the processed data on a physical layer.)..

Regarding claim 31, Kuhl further teaches a first buffer buffering asynchronous transfer mode traffic corresponding to the non-unspecified bit rate (see Fig. 6 Box 602b); and

a second buffer buffering asynchronous transfer mode traffic corresponding to the unspecified bit rate (see Fig. 6 Box 602a).

Regarding claim 32, Kuhl further teaches the scheduler forwards asynchronous mode traffic of the non-unspecified bit rate stored in the first buffer with the same priority of the multi-protocol label switching traffic of constant bit rate (see Table C), finds a total channel bandwidth of asynchronous transfer mode traffic corresponding to non-unspecified bit rate, and forwards the asynchronous transfer mode traffic stored in the

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first buffer through a single channel having a bandwidth equal to the total channel bandwidth (see paragraph 88 lines 1-6).

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Nakamichi et al. (US 6,859,842), Motobayashi (US 2004/0170178), Reeves et al. (US 2002/0071439), and Ando et al. (US 2004/0213242) are all cited to show the systems which are considered pertinent to the claimed invention.

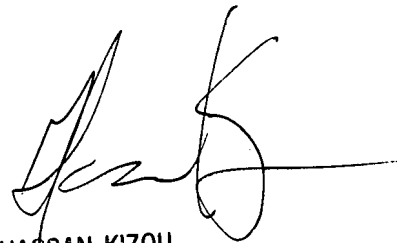
5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Betty Lee whose telephone number is (571) 270-1412. The examiner can normally be reached on Monday-Thursday 9-5 EST and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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